

Using Portfolio Analysis on the NIDDK Hematology (P30) Centers Program

Paula Fearon¹ and Terry Bishop²

¹Office of Portfolio Analysis; ²NIDDK –Hematology Program • tb232j@nih.gov

Introduction

The NIDDK Hematology Centers program consists of five P30 Core Centers of Excellence. One goal of this program is to foster collaborative research thereby developing a strong community of hematology investigators. In this presentation we used publications supported by the P30s to analyze the nature of the collaboration and the impact on the scientific topics in the field.

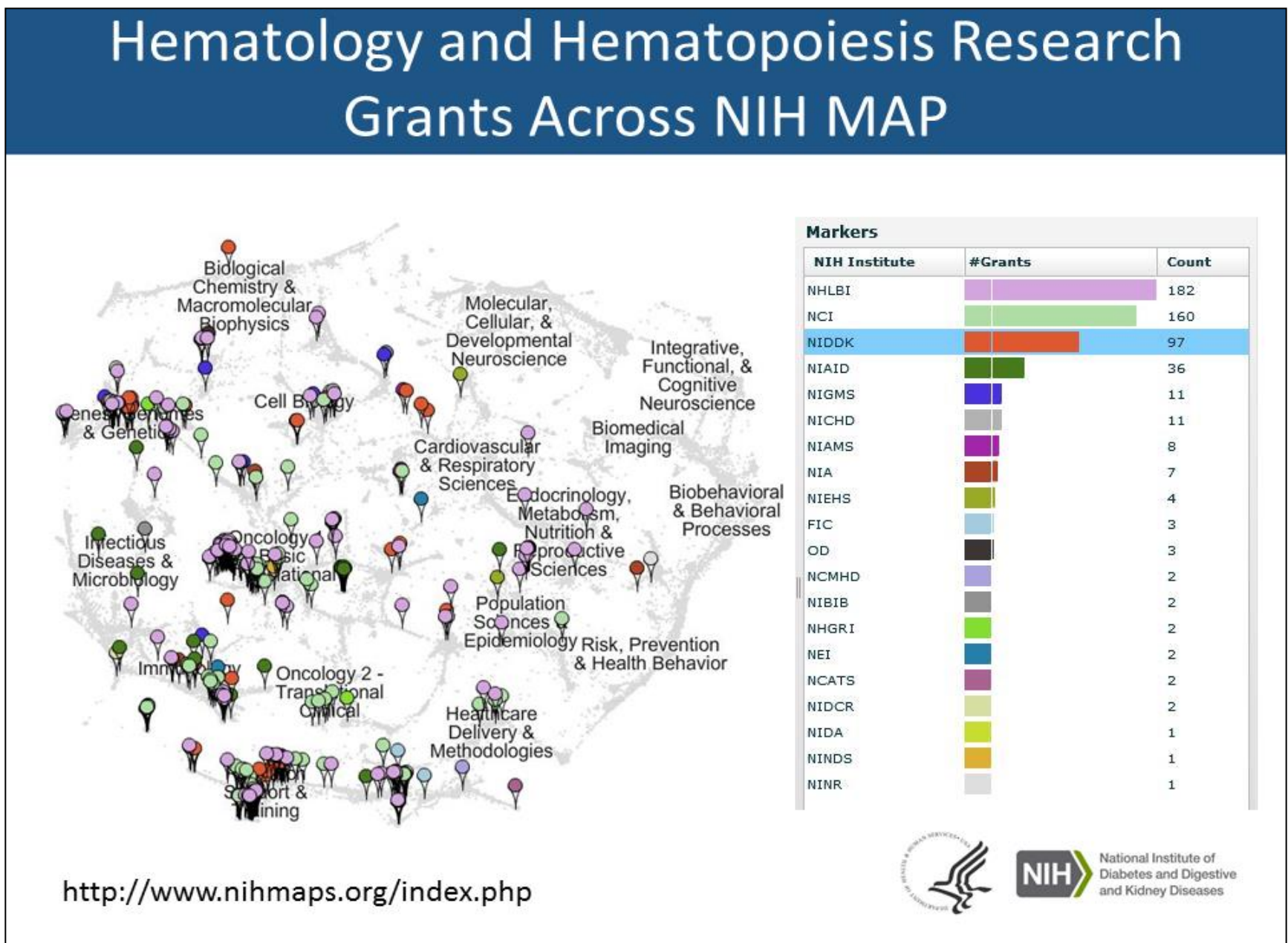


Figure 1: Map of Hematology Research at NIH

Methods

- ♦ Papers citing P30 support were identified using SPIRES
- ♦ The list of co-authors was disambiguated, used to generate a co-author network in the Sci2 tool, and visualized with Gephi
- ♦ Abstracts from publications harvested with Scopus were visualized using IN-SPIRE

Results

Co-Author Networks

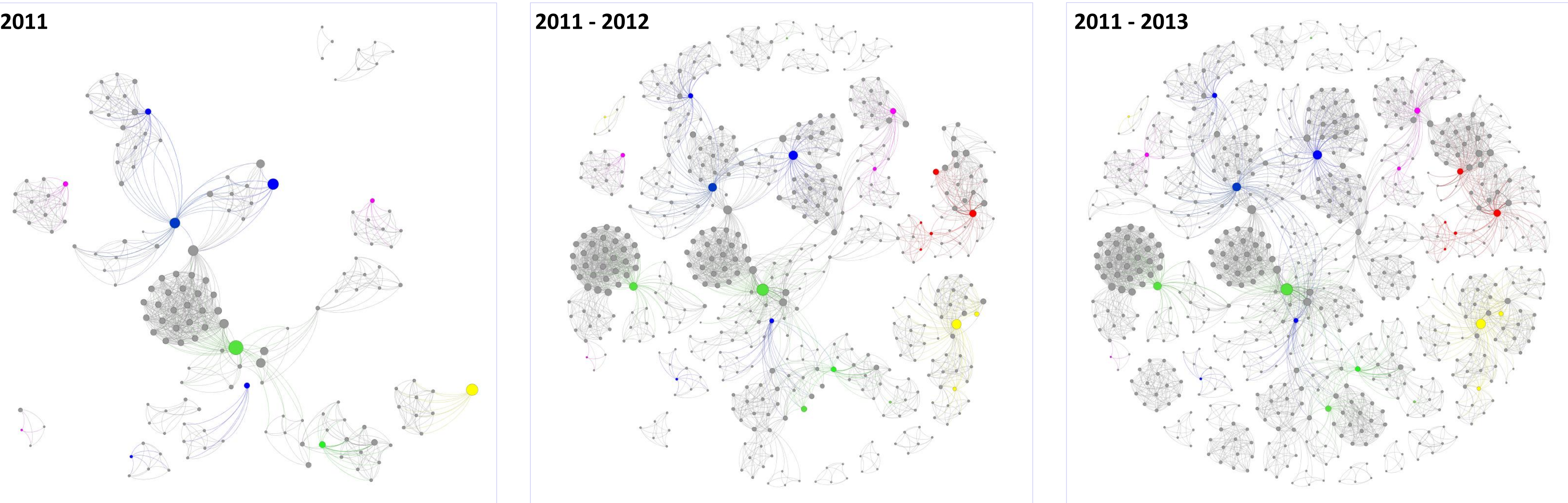


Figure 2: Co-author networks of publications citing support from the P30 Centers between 2011 and 2013. Each center is represented by a different color (red, blue, green or yellow), and the Core Directors are highlighted in magenta. The size of the nodes is proportional to the total number of connections each author has (based on the three years together).

	2011	2011-2012	2011-2013
Number of Papers	25	80	118
Number of Authors	164	496	575
Network Diameter	6	9	10
Average Path Length	2.57	4.32	4.75
Number of Shortest Paths	7,964	99,740	278,320
% Co-Authors 'networked'	52%	83%	88%

Table 1: Summary of Network Statistics

As the number of papers increased, so did the total number of authors and the overall diameter of the network. The biggest changes in the characteristics of the network were between 2011 and 2012, when the percentage of networked authors jumped from 52% to 83%

Scientific Landscape

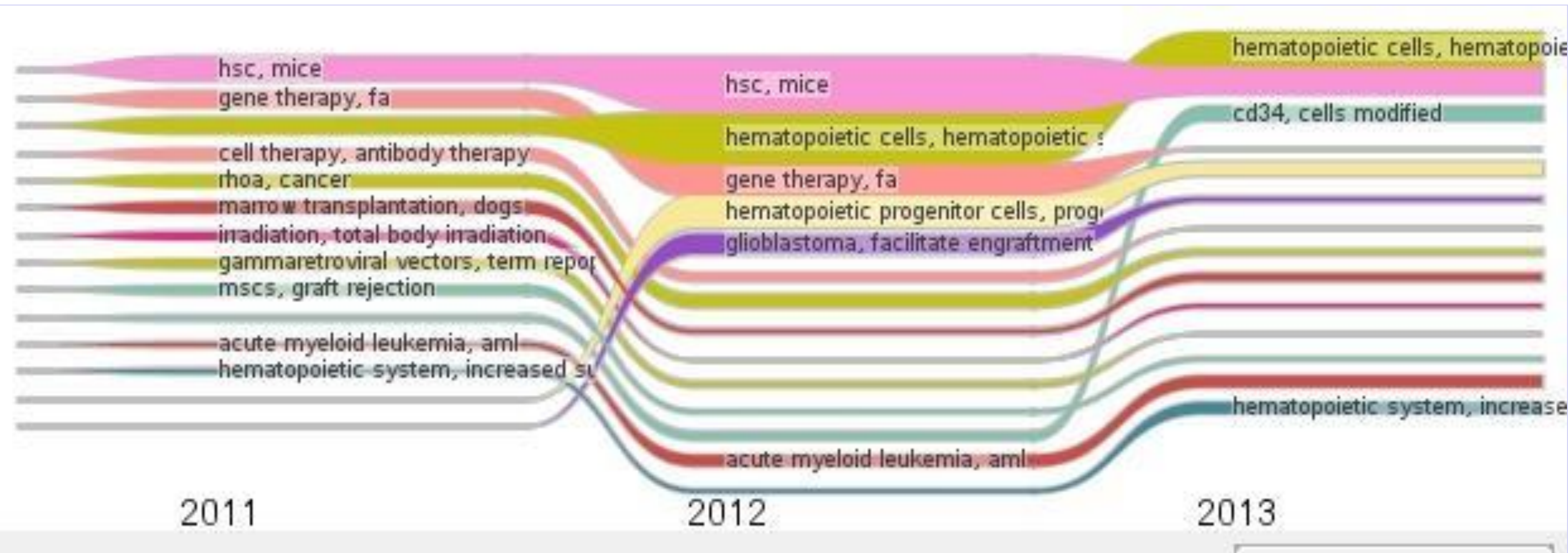


Figure 3: Landscape Analysis of Publications The themes present in the publications were analysed using IN-SPIRE. Results suggest that CD34 may be an emerging area in this portfolio.

Discussion

- ♦ Hematology/hematopoiesis research is funded broadly across NIH
- ♦ Co-authored networks showed a growing collaboration amongst users of the NIDDK P30 Cores
- ♦ Network statistics were consistent with a growing collaboration
- ♦ IN-SPIRE facilitated identification of possible emerging fields in the publications over time